

REMARKS

Reconsideration and allowance of the above-identified application are respectfully requested. Claims 1-31 and 40-45 are pending, wherein claims 1, 12 and 15 have been amended and new claims 40-45 have been added.

Applicants wish to thank the Examiner for allowing claims 19-21 and 29-31. Applicants also thank the Examiner for removing all previous grounds for rejecting the pending claims. Applicants have amended the non-allowed claims in an effort to distinguish over the newly-cited art.

The Office Action rejects claims 1 and 3-5 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,912,470 to Eibofner et al. As shown in Figure 1, Eibofner et al. discloses a light curing gun having a pistol grip that extends laterally from the main body and a fiber optic wand extending from the body. The light source is positioned completely within the main body only slightly off-center from the middle. Claim 1 as amended distinguishes over Eibofner et al.

Claim 1 defines a dental device comprising "an elongate body", which clearly distinguishes over the light curing gun of Eibofner et al. (and also the light curing gun 131 of Bailey et al., discussed below). In addition, the dental device of claim 1 "is shaped and configured so as to remain substantially upright when the tapered proximal end of the body is placed into a holding slot of a dental handpiece holding tray". Support for amended claim 1 is shown in Figure 4 of the present Application. Whereas the Office Action alleges that the Eibofner et al. device "is inherently capable of functioning to facilitate insertion into a holding slot", it is readily apparent from Figure 1 that the Eibofner et al. device is top-heavy and unbalanced such that it would be unstable if the tapered end 3 of the light curing gun were placed into a holding slot of a dental handpiece holding tray. The fact that light curing guns are inherently top-heavy and unbalanced likely explains why the light curing gun 131 of Bailey et al. is holstered in the slot of the portable dental apparatus with the light-emitting end facing downward rather than upward or outward. In view of the foregoing, Applicants believe that claim 1 as amended is neither anticipated by nor obvious over Eibofner, either alone or in combination with any other art of record.

Moreover, because Eibofner et al. neither teaches nor suggests actually inserting the tapered handle 3 into the holding slot of a dental handpiece holding tray, there is no teaching or suggestion in the art that would have motivated one of skill in the art to combine Eibofner et al. with any of the other cited references in order to obtain a dental device having the specific structural and functional features recited in claim 1. For example, neither U.S. Patent No. 5,634,711 to Kennedy et al. nor U.S. Patent No. 6,102,696 to Osterwalder et al. teach or suggest a dental curing light having a tapered end configured so as to fit within a holding slot of a dental handpiece holding tray. Accordingly, the combined teachings of Eibofner et al., Kennedy et al., and Osterwalder et al. would not have motivated one of skill in the art to obtain the dental curing device of claim 1. Bailey et al. similarly neither teaches nor suggests any of the features recited in claim 1. In one embodiment, Bailey et al. discloses a light curing gun 131 similar in design to the unbalanced, non-elongate curing gun of Eibofner et al. In another aspect, Bailey et al. discloses a dental curing device 30 that includes no light source whatever, but is merely a conduit through which light generated within the portable dental apparatus 10 is emitted. In view of this, claim 1 is clearly patentable and nonobvious over the combination of Eibofner et al., Bailey et al., Kennedy et al., and Osterwalder et al.

Because claims 2-14 depend from claim 1, they are patentable for at least those reasons why claim 1 is patentable. In addition, they include additional limitations that may further distinguish over the cited art.

The Office Action rejects claims 15-18 and 25-27 under 35 U.S.C. § 103 as being unpatentable over Bailey et al. in view of Osterwalder. In rejecting these claims, the Office Action states the following:

Bailey shows a light curing device 30 having a body as suggested that is sized to be received in a holding tray at 83 that also receives other dental instruments as shown. Bailey does not show a light source at the distal end. Osterwalder shows a light source 32 at the distal end. It would be obvious to one of ordinary skill in the art to modify Bailey to include a light source located as shown by Osterwalder in order to make use of art known ways of locating element to better deliver light to the worksite.

The foregoing characterizations and conclusions are in error because, not only does the light curing device 30 of Bailey et al. not have a light source at the distal end, it has no light

source whatsoever anywhere within a hollow body between proximal and distal ends. Instead, the light source 61 for curing device 30 is completely external and located within the portable dental apparatus 10. As taught in Bailey et al.:

The light curing wand 30 is connected via fiber optic line 60 to a conventional source of light 61 located within a bracket fixedly mounted within the interior of main housing 11. . . A separate fiber optic line 62 extends from source 61 through line 38 to the high-speed drill handpiece 29 providing illumination.

Col. 4, lines 27-36. Thus, the light source 61 that illuminates the light curing wand 30 is located "within the interior of main housing 11". The reason for this is so that the light source 61 can provide illumination to both the curing wand 30 and the high-speed drill handpiece 29. It would therefore be contrary to Bailey et al. to relocate light source 61 within the light curing wand 30 because to do so would deprive the dental apparatus 10 of the ability to "provid[e] illumination" to the high-speed drill handpiece 29. Therefore, one of skill in the art would not have been motivated, in view of Osterwalder et al., to relocate the light source 61 from "within the interior of main housing 11" to within the light curing wand 30, let alone to a distal end of the light curing wand 30. For this reason alone, claim 15 is believed to be patentable and nonobvious over the combination of Bailey et al. and Osterwalder et al.

In addition, claim 15 has been amended to specify that the dental device comprises "a power cord extending from the proximal end of the body". The light curing device 30 in Bailey et al., because it has no independent light source contained therein, includes no power cord at all, let alone a power cord "extending from the proximal end of the body". It is obvious that since the light source 61 is located "within the interior of main housing 11" there would be absolutely no reason to modify the light curing wand 30 of Bailey et al. to include a power cord. Moreover, because Osterwalder et al. discloses a "self-contained light source for curing light-initiated resins" (Abstract), Osterwalder et al. likewise neither teaches nor suggests a dental device having a power cord located anywhere, let alone one "extending from the proximal end of the body". In view of this, the combination of Bailey et al. and Osterwalder et al. fail to teach or suggest every limitation found in claim 15. For this additional reason, claim 15 is clearly patentable and nonobvious over the combination of Bailey et al. and Osterwalder et al.

Finally, the light curing gun 131 of Bailey et al. does not contain the required structural features set forth within claim 15. Moreover, there is no teaching or suggestion in the art that would have motivated one of skill in the art to modify the light curing gun 131 of Bailey et al., in view of Eibofner et al., Kennedy et al., or Osterwalder et al., to obtain the dental device of claim 15.

Because claims 16-18 and 25-28 depend from claim 15, they are likewise patentable over the art of record. Moreover, these claims include additional limitations that may further serve to distinguish over the art of record.

Applicants have also added new claims 40-45 in order to claim an additional embodiment disclosed in the application. New claim 40 is similar to cancelled claim 32, but further recites "an LED light source laterally disposed at the distal end of the body in order to emit light suitable for curing a light-curable compound in a direction that is lateral to the body". Support for this limitation is shown in Figures 1-4 and is inherent in the accompanying written description. This limitation, in combination with the "elongate body", "heat sink", and "transilluminating lens" limitations, are believed to distinguish over the prior art of record. The light emitting apparatus of Kennedy et al. is only capable of emitting light axially relative to the cylindrical body. Kennedy et al. neither teaches nor suggests an LED light source that is "laterally disposed at the distal end" that is able to emit light "in a direction that is lateral to the body". Neither Bailey et al. nor Eibofner et al. teach or suggest a dental device having "an elongate body" and "an LED light source laterally disposed at the distal end of the body".

Finally, Osterwalder et al. neither teaches nor suggests a heat sink or a transilluminating lens at the distal end. In view of the size and structural relationship between the heat sink and LED array of Kennedy et al. it would have required extensive design modification and undue testing to modify the Osterwalder et al. device to include the heat sink and transilluminating lens of Kennedy et al. Likewise, it would have required extensive design modification and undue testing to modify the Kennedy et al. device to have a light source configuration similar to that of Osterwalder et al., especially given the fact that the Osterwalder et al. device provides no heat sink and no lens at the distal end. In view of the foregoing, Applicants submit that claim 40 is patentable and nonobvious over the prior art of record. New claims 41-45 depend from 40 and are likewise patentable over the prior art of record. In addition, these claims include additional limitations that may serve to further distinguish over the prior art of record.

" In view of the foregoing, Applicants believe the Application as amended is in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this Application that may be clarified through a telephone interview, or that may be overcome by Examiner Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 9th day of January 2004.

Respectfully submitted,



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